

NOTES ON A NEW ALOE FROM RHODESIA AND A NEW ALOE FROM THE TRANSVAAL.

(With Plates XX and XXI.)

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There are still several species of *Aloe* awaiting description, and it is hoped that the majority will be published in the near future. In the present short paper the descriptions are given of a new *Aloe* from Rhodesia, and a new *Aloe* with remarkably bluish-grey leaves from the Pretoria District, Transvaal.

Aloe Christianii, Reynolds. Species nova et distincta. *Planta* succulenta, caulibus 1—1.3 met. longis. *Folia* 30—40, dense rosulata, lanceolato-attenuata, erecto-patentia, usque ad 75 cm. longa, 10—12 cm. lata; supra, basi leviter concava, sensim canaliculata, viridia, immaculata; subtus convexa, immaculata, levissime obscure striata; ad margines sinuato-dentata, dentibus brunneis, rectis, deltoideis, pungentibus, 3—5 mm. longis, 10—20 mm. distantibus armata. *Inflorescentia* 2—3 met. alta; scapus supra medium ramosus; rami 5—10, sub-erecti. *Racemi* cylindrico-acuminati, usque ad 25—30 cm. longi, sub-dense 40—50 floribus. *Bractee* ovato-acutae, 5—6 mm. longae, 3 mm. latae, albidiae, scariosae, 5—7 nervatae. *Pedicelli* 10—12 mm. longi. *Perigonium* rubrum, cylindrico-trigonum, usque ad 45 mm. longum, supra ovarium haud constrictum, basi rotundatum, 9—10 mm. diam., brevissime stipitatum. *Segmenta exteriora* per 15 mm. libera, sub-acuta, patula; interiora obtusiora, albida, rubro-carinata. *Filamenta* complanata. *Genitalia* 4—5 mm. exserta. *Ovarium* 8 mm. longum, 4 mm. diam.

Hab. Southern Rhodesia: Salisbury District, 25 miles east of Salisbury on the farm "Ewanrigg," fl. 12th June, 1936, Reynolds 1885! (type) in National Herb., Pretoria, and in Bolus Herb., Kirstenbosch. Plants No. 769.12.35 in garden of the Botanical Section, Div. of Plant Industry, Pretoria; and in National Botanic Gardens, Kirstenbosch. (Plate XX.)

The species here described for the first time was originally collected by Mr. H. Basil Christian on his farm "Ewanrigg," 25 miles east of Salisbury, Southern Rhodesia, and is named in honour of Mr. Christian, who for many years has been an authority and cultivator of South African and Rhodesian *Aloes*. Mr. Christian is also the author of several

new species of Rhodesian *Aloes*. *A. Christianii* is widely distributed in Rhodesia, being found in the Salisbury, Hartley, Mazoe, Gwelo (Que Que) and Darwin districts. East of the Shamanoia River, and as far as Rusape, it almost invariably suckers from the base, forming groups of a dozen and more plants, while west of the Shamanoia River it never suckers, but occasionally divides at the summit into 2—3 heads. A smaller form with narrower more attenuate leaves occurs near Ndola in Northern Rhodesia. This species grows mostly on koppies among trees and bushes, sometimes on treeless flats, and is found mostly in scattered colonies of up to 20 plants, flowering usually in May and June.

In old specimens the rosette of leaves reaches 4—5 feet in diameter, the leaves often drying and turning reddish in winter, while sometimes, probably due to seasonal conditions, the leaf lower surface is broadly and deeply sulcate. Occasionally the inflorescence is sent out at an oblique angle, when this occurs the weight of the fruit usually pulls the plant over sideways. The tube and segments of *A. Christianii* are thicker and more fleshy than is usual in *Aloe*, while the degree of basal stipitation does not appear to be a fixed character and varies from incipient to distinctly stipitate.

In habit of growth, stem, rosette, leaves and height of inflorescence, *A. Christianii* somewhat resembles *A. pretoriensis* Pole Evans, in the section *Purpurascens*, but the latter differs with larger fleshier bracts, longer pedicels, differently shaped flowers, and more divaricate branching. The small bracts, stipitation, and long perianth tube seem nearest the section *Aethiopicæ*, but the short pedicels, and the combination of floral characters are such that *A. Christianii* does not fit well into any existing section.

Description.—Plant succulent, with stem simple, up to 1—1.5 met. long, erect or decumbent, 10—15 cm. diam., covered with the remains of dry leaf sheaths. *Leaves* 30—40, densely rosulate, lanceolate-attenuate, erectly spreading, up to 75 cm. long, with 10—15 cm. of the apical part dry and twisted, 10—12 cm. broad at base; upper surface slightly concave at base, gradually more canaliculate upwards, dull green, entirely immaculate; lower surface convex, dull bluish-green, very obscurely striate, entirely immaculate; margins sinuate-dentate, sub-corneous, armed with teeth 3—5 mm. long, 10—20 mm. distant, the teeth deltoid, pungent, pinkish to pale brown in colour, straight, sometimes directed slightly forward, the interspaces rounded. *Peduncle* flattened low down, 5—6 cm. diam., more terete upwards, brown, covered with a greyish powdery substance. *Inflorescence* a branched panicle 2—3 met. high, compactly branched from about or above the middle with 5—10 sub-erect branches, the 1—3 lowest sometimes with 1—2 branchlets producing a

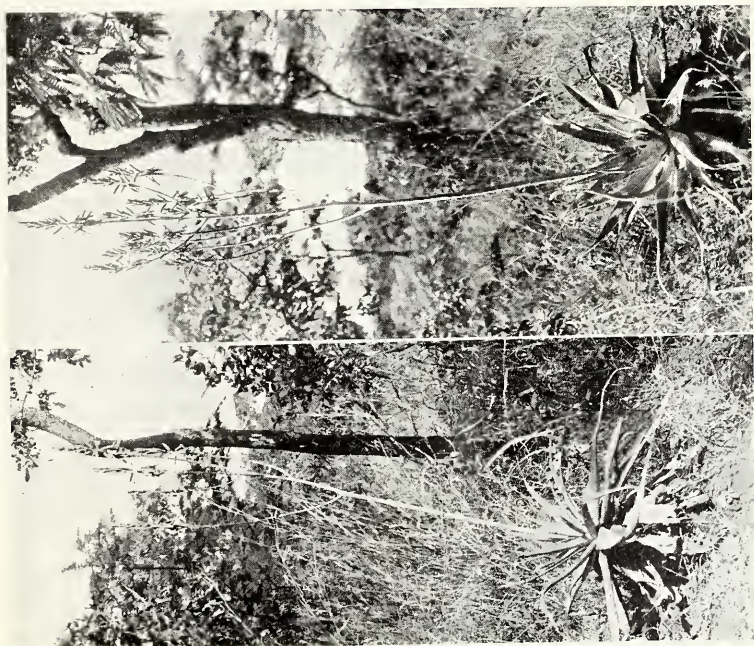


FIG. 1.

FIG. 2.

PLATE XX: *Aloe Christianii*, Reynolds.

- FIG. 1. Plant in natural habitat, fl. 1 June 1936 on Mr. H. Basil Christian's farm "Ewanrigg", Acturus, S. Rhodesia; the branches more arcuate than usual.
 FIG. 2. Plant in natural habitat, with compact sub-erect branching typical of the species.
 FIG. 3. Flowers natural size, from the bud to post-pollination stage.



FIG. 3.



FIG. 1.

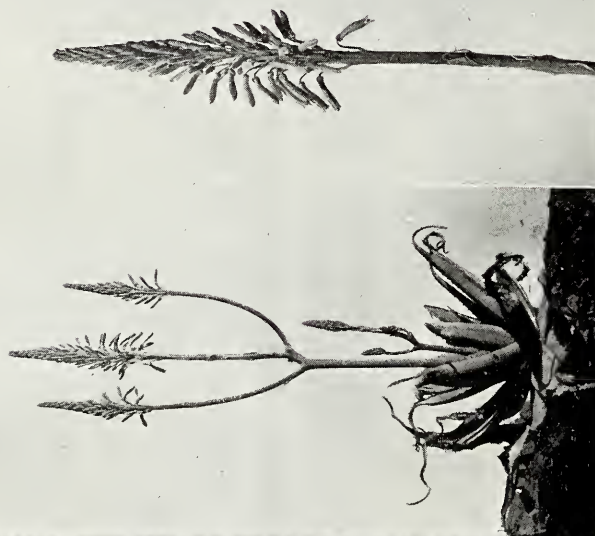


FIG. 2.



FIG. 3.

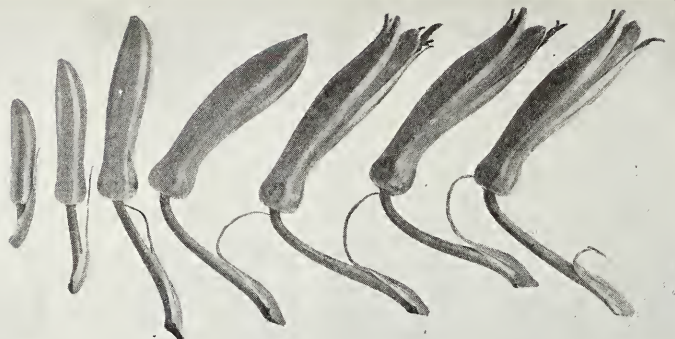


FIG. 4.

PLATE XXI: *Aloe Verdoorniae*, Reynolds

FIG. 1. Plant in natural habitat, Trigaarts Poort, Pretoria District, fl. 1 July 1936.

FIG. 2. Plant ex Trigaarts Poort, fl. 14 June 1936 in Johannesburg.

FIG. 3. Raceme, one-sixth natural size.

FIG. 4. Flowers 1/1, from the bud to post-pollination stage.

total of 10—18 racemes, the lowest branches subtended at base by ovate-acute sub-scarious many nerved brownish bracts up to 6 cm. long; sometimes 2 inflorescences simultaneously. *Racemes* cylindric-acuminate, 25—30 cm. long, sub-densely 40—50 flowered, the terminal the highest, the lateral slightly shorter, unicoloured; the buds sub-erect, sub-densely imbricate, gradually laxer downwards, with the lowest open flowers cernuous to pendulous, 10—15 mm. distant. *Bracts* ovate-acute, 5—6 mm. long, 3 mm. broad, white, scarious, about 5—7 nerved. *Pedicels* the lowest of terminal racemes 9—12 mm. long, lengthening to 15 mm. in the fruit. *Perianth* nearest Pompeian Red (R.C.S.) with a bloom, cylindric-trigonus, up to 45 mm. long, straight, 9—10 mm. diam. at base, the base rounded, usually shortly stipitate. *Outer Segments* free for 15 mm., very obscurely about 5 nerved, the apices sub-acute, slightly spreading, slightly brownish. *Inner Segments* free, but dorsally adnate to the outer for two-thirds their length, white with thin edges, the upper third with a keel the colour of the perianth shading to brownish at apex, the apices brownish on inner surface, more obtuse and more spreading than the outer. *Filaments* flattened, the 3 inner narrower and lengthening in advance of the 3 outer, rather white. *Anthers* orange, 4 mm. long, the 3 inner and 3 outer in turn exerted 4—5 mm. *Style* filiform, flesh-coloured. *Stigma* at length exerted 4—5 mm. *Ovary* green, 8 mm. long, 4 mm. diam., very slightly tapering into the style, finely 6 grooved, *Capsule* about 30 mm. long, 12 mm. diam., 6 grooved, green, for some time unwrapped with the remains of the dry perianth.

Aloe Verdoorniae Reynolds. Species nova in sectione *Saponariarum*, *A. Davyanae* Schönl. affinis, sed foliis caeruleo-glaucis et maculis paucioribus obscurioribusque differt. *Planta* succulenta, acaulis, nec sobolifera, nec caespitosa. *Folia* circiter 20, dense rosulata, lanceolato-attenuata, erecto-patentia, usque ad 20—25 cm. longa, 8—9 cm. lata, carnosa; supra planiuscula, apicem versus leviter canaliculata, caeruleo-glaucia, obscure lineata, maculis obscuris paucis adspersa; subtus convexa, pallidiora, obscure maculata, interdum immaculata; ad margines sinuato-dentata, dentibus corneis brunneis deltoideis pungentibus 4—5 mm. longis, circiter 10 mm. distantibus armata. *Inflorescentiae* usque ad 1 met. altae, 2—4 consequentes; scapus plerumque medio 2—3 ramosus. *Racemi* cylindrico-acuminati, usque ad 30 cm. longi 8—9 cm. lati. *Bracteae* deltoideo-acuminatae, 30—35 mm. longae, plurinervatae. *Pedicelli* usque ad 30 mm. longi. *Perigonium* rubrum, 36 mm. longum, basi subgloboso-inflatum et circiter 7 mm. diam., supra ovarium paulum constrictum (5.5 mm. diam.), hinc levissime decurvatum et faucem versus ampliatus. *Segmenta exteriora* per

10 mm. libera, marginibus pallidioribus, obscure 5—7 nervatae ; interiora latiora, obtusiora. *Filamenta* complanata. *Genitalia* 2—4 mm. exserta. *Ovarium* 8 mm. longum, 3 mm. diam.

Hab. Transvaal : Pretoria District, Trigaarts Poort, fl. 27 June, 1935, Verdoorn 1623! ; fl. 1 July 1936, Verdoorn 1624!, in National Herbarium Pretoria and Bolus Herb. Kirstenbosch ; cultivated plant ex Trigaarts Poort fl. 14th June 1936 in Johannesburg, Reynolds 963!, in Nat. Herb. Plants 344.6.35 in garden of Botanical Section, Div. of Plant Industry, Pretoria, and 1557/36 in National Botanic Gardens, Kirstenbosch. (Plate XXI.)

This new *Aloe* with its very distinctive leaves, was collected by Miss I. C. Verdoorn, Botanist at the Division of Plant Industry, Pretoria, and is named in honour of the collector, to whom so many plant lovers are greatly indebted for the identification of their specimens. At Trigaarts Poort, which is about 12 miles north-east of Bronkhorstspuit on the Rhenosterkop road, this species is found on both sides of the poort, on grassy rocky slopes, sometimes wedged in between rocks, and in fairly large numbers. Dr. D. F. du T. Malherbe, Pretoria University, has collected it much further east at a point about 15 miles north-west of Belfast. It is also found near the Premier Mine, where it grows socially with *A. pretoriensis* Pole Evans, and *A. Davyana* Schönl., while Dr. F. Z. v.d. Merwe has also collected it 17 miles west of Witbank, near Balmoral.

A. Verdoorniae is variable in shape and size of flowers, but it is immediately distinguished from all others in the Section *Saponariae* by its peculiar bluish-grey leaves with the pronounced horny reddish-brown margin standing out in sharp contrast. Usually the upper surface is sparingly and obscurely spotted, with a few spots on the lower surface ; some plants are found with both surfaces immaculate, while in others the lower surface is more spotted than the upper. At Trigaarts Poort this species is not found in association with any other *Aloe*, and the bluish-grey leaves is a fixed character. The spots are always rather obscure, scattered, and not in regular transverse bands. In mature specimens, up to 4 consecutive inflorescences appear, the peduncles being branched at the middle or lower, each bearing 2—3 racemes.

In racemes and flowers *A. Verdoorniae* appears to be nearest allied to *A. Davyana* Schönl., but in the typical form of the latter from Pretoria hills, the leaves are much greener, with the spots more copious and more clearly defined, while the bracts are shorter and less fleshy, with the buds more distinctly striped and the flowers much paler in colour. Solitary plants occur wild ; the species does not sucker and form dense groups, and usually flowers during June and July. The leaf sap does not discolour.

Description.—*Plant* succulent, acaulescent, solitary, not stoloniferous, *Leaves* about 20, densely rosulate, lanceolate, attenuate, erectly spreading, slightly recurved near apex, up to 20 cm. long with an additional 5—10 cm. of the apex dry and twisted, 8—9 cm. broad at base, rather fleshy; upper surface flat or slightly concave at base, slightly more canaliculate upwards, obscurely lineate, sometimes immaculate, usually with a few scattered rather obscure dull whitish oval spots; lower surface convex, paler than the upper, immaculate, or with several obscure dull white spots, the spots scattered, not arranged in regular transverse bands; the margins sinuate-dentate, armed with deltoid pungent slightly deflexed reddish-brown teeth 4—5 mm. long, about 10 mm. distant, joined by a thick reddish-brown corneous line, the interspaces rounded. *Inflorescence* 2—4 consecutively, up to 1 met. high. *Peduncle* flattened low down, 3 cm. diam., semi-terete upwards, brown, lightly covered with a greyish powdery substance; usually with 2—3 branches from the middle of lower, the lowest branch subtended at base by an ovate-acuminate sub-scarious many nerved bract up to 10 cm. long, 3 cm. broad at base; the branches below the racemes clothed with several deltoid acuminate many nerved sterile bracts up to 3 cm. long, the bracts rather fleshy near base, spreading and more scarious above. *Racemes* unicoloured, cylindric-acuminate, the terminal about 30 cm. long, 8—9 cm. diam., the buds sub-erect, densely imbricate, obscurely dull striped, with their bracts as long, gradually laxer downwards with the lowest open flowers up to 25 mm. distant, cernuous to sub-pendulous. *Bracts* deltoid-acuminate, as long as their pedicels or slightly longer, many nerved, rather fleshy and sub-amplexicaul at base, more scarious and spreading above. *Pedicels* the lowest of terminal racemes up to 3 cm. long. *Perianth* coral-red (R.C.S.) with a bloom, about 36 mm. long, with a sub-globose basal swelling 7 mm. diam., constricted above the ovary to 5.5 mm., thence slightly decurved and enlarging a little towards the throat, slightly compressed laterally. *Outer Segments* free for 10 mm., very obscurely 5—7 nerved, the margins with pale 1 mm. wide border, the apices sub-acute, spreading, slightly brownish. *Inner Segments* dorsally adnate to the outer for 25 mm., broader than the outer, with broader pale margins, and more obtuse more spreading brownish apices. *Filaments* pale lemon, flattened, the 3 inner narrower and lengthening in advance of the 3 outer. *Anthers* the 3 inner and 3 outer in turn exserted 2—4 mm. *Style* yellower than the filaments. *Stigma* at length exserted 2—4 mm. *Ovary* 8 mm. long, 3 mm. diam., finely 6 grooved, green.